

Orion Tile Annunciator

The Orion Tile Annunciator is a web-based software-defined alarm annunciation product. The Tile Annunciator webpages are served directly from any Orion automation platform and provide simplified setup, categorization and viewing of active and acknowledged alarms in substation HMI and web-based SCADA applications. Any data point in the Orion database, either obtained from attached IEDs or calculated, can be designated as an alarm point and displayed on the Tile Annunciator. Tile sizing, text sizing, and page layout is optimized for use with the NovaTech 19" rack mount touchscreen monitor, available "direct connect" on the OrionLX+ and OrionSX when ordered with the multimedia option with video, keyboard, and mouse ports.

Summary of Features:

- Up to 60 alarm tiles per page, up to 24 pages; total 1440 alarms
- Time-stamping to the precision of the point source, usually 1ms
- Tiles can be assigned either Orion point name, Alias¹ name, or user-defined name
- Alarm history provided
- Alarm state retained through power cycling
- User-defined alarm ON message and alarm OFF message
- Simple set-up in NovaTech Configuration Director (NCD)

OrionLX Ordering Information:

Option #108. Requires the Alarm-Archive-Retentive (AAR) option.

Configuration Steps:

1. Select the points in the Orion database that should be alarm points.
2. Configure alarm parameters (ON state, OFF state, alarm message, retentive, etc.).
3. Add a Tile Annunciator page and name it.
4. Move alarm points to tiles using grid row and column coordinates (R1 C2, R2 C1, etc.).
5. Rename tiles as desired.
6. View tile arrangement. Rearrange tiles as desired using simple drag and drop.

The screenshot shows the configuration interface for the Orion Tile Annunciator. The main window is titled "High Side Breaker Alarms Settings". On the left, there is a sidebar with "Port Options" and "Delete Port" buttons. Below that, there are sections for "General", "Inputs", "Outputs", and "Annunciator". The "Annunciator" section is expanded, showing "Add New Page", "Protective Relay Failure", "Security Alarms", "High Side Breaker Alarms", and "Transformer 2 Alarms". A red box highlights the "Transformer 2 Alarms" section, with a label "Tile Annunciation Pages".

The main area shows "Page Options" with "Accept" and "Cancel" buttons. Below that, there is a "Description" field set to "High Side Breaker Alarms". There are radio buttons for "Point Name" (selected) and "Alias". Below that is an "Alarm Points List" with a search bar and a table of points. A red box highlights the "Alarm Points List" table, with a label "Orion database points selected and configured as alarm points".

The "Alarm Points List" table has columns for "Binary" and "Analog". The points listed include:

- Comm Fail @551-Line1-Primary
- Comm Fail @50 Series (Primary)
- Login Telnet Session Status @Orion Internal
- Line 3 421 Failure @Logic
- Line 1 421 Failure @Logic
- Line 2 421 Failure @Logic
- Comm Fail @Bitronics 871
- Comm Fail @50 Series (Secondary)
- Local Root Session Status @Orion Internal
- Login TTY Session Status @Orion Internal
- PPP Session Status @Orion Internal
- Remote Root Session Status @Orion Internal
- Secure Passthru Session Status @Orion Internal
- HTTP Session Status @Orion Internal
- Pro FTPD Session Status @Orion Internal
- Line 1 L90 Failure @Logic
- Line 1 75% Breaker Wear @Logic
- Line 1 Low SF6 Pressure @Logic
- Line 1 Long Breaker Op Time @Logic
- Line 2 Low SF6 Pressure @Logic
- Line 2 75% Breaker Wear @Logic
- Line 2 Long Breaker Op Time @Logic
- Line 3 L90 Failure @Logic
- Line 3 Low SF6 Pressure @Logic
- Line 3 75% Breaker Wear @Logic
- Feeder 231 F60 Failure @Logic
- Feeder 232 F60 Failure @Logic
- Feeder 233 F60 Failure @Logic

Below the "Alarm Points List" is a table with columns for "Point Name" and "Tile Name". A red box highlights this table, with a label "Points mapped to tiles". The table contains the following data:

Point Name	Tile Name
R1 C1	Line 1 75% Breaker Wear @Logic
R1 C2	Line 1 Low SF6 Pressure @Logic
R1 C3	Line 1 Long Breaker Op Time @Logic
R2 C1	Line 2 75% Breaker Wear @Logic
R2 C2	Line 2 Low SF6 Pressure @Logic
R2 C3	Line 2 Long Breaker Op Time @Logic
R3 C1	Line 3 75% Breaker Wear @Logic
R3 C2	Line 3 Low SF6 Pressure @Logic
R3 C3	Line 3 Long Breaker Op Time @Logic

Below the table is a grid of 9 green tiles, each representing an alarm point. A red box highlights this grid, with a label "Tiles as they will appear".

¹ "Alias" is a feature in the Orion that enables users to assign an alternate name for Orion database points.

This alternate name can be used in multiple Orion applications such as Alarming, SCADA, and Sequence of Events.

Tile Annunciator in Operation

Below are three Tile Annunciator pages (each captured at a different time):

On this “High Side Breaker Alarms” page, one active unacknowledged alarm is shown. The “Security Alarms” page has two active alarms. The “Protective Relay Failure” page has one active alarm.

On this “Security Alarms” page, two active acknowledged alarms are shown. The “High Side Breaker Alarm” page has one point that was in alarm but went out of alarm, but was not acknowledged. The “Protective Relay Failure” page has one active alarm.

On this “Protective Relay Failure” page, one point that was in alarm went out of alarm and was not unacknowledged. The “High Side Breaker Alarm” page has one point that was in alarm but went out of alarm, but was not acknowledged. No alarms on the “Security Alarms” page.

